

PRODUCT DATA SHEET

Sikafloor® Marine-590

IMO approved self-levelling decorative resin

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Sikafloor® Marine-590 (A)	Sikafloor® Marine-590 (B)
Chemical Base	Polyurethane	Isocyanate
Color (CQP001-1)	Colored	Transparent
	mixed	Various colors available (see color design chart)
Density	1.2 kg/l	1.2 kg/l
	mixed	1.2 kg/l
Solid Content	100 %	
Mixing Ratio	by weight 75 : 25	
Application Temperature	substrate, climate 15 – 30 °C ^{A, B}	
Shore A Hardness (CQP023-1 / ISO 48-4)	84	
Tensile Strength (DIN 53504)	8 MPa	
Elongation at Break (DIN 53504)	65 %	
Pot-Life	10 °C	120 minutes
	20 °C	90 minutes
	30 °C	45 minutes
Shelf Life	9 months ^C	12 months ^C

CQP = Corporate Quality Procedure ^{A)} substrates must be 3 °C above the dew point

^{B)} max. 80 % r.h.

^{C)} stored in sealed container in up-right position in a dry place between 5 and 30 °C, protected from direct sunlight

DESCRIPTION

Sikafloor® Marine-590 is a self-levelling aliphatic 2-component polyurethane decorative floor resin. It is part of the Sikafloor® Marine Deco Comfortsystem for interior use and the Sikafloor® Marine Deco Teak system for interior and exterior use.

Sikafloor® Marine-590 has been tested according to the FTP Code system and is approved according to the IMO Marine Equipment Directives.

If Sikafloor® Marine-590 needs to be accelerated, Sikafloor® Marine-001 or -002 can be used.

PRODUCT BENEFITS

- Good application characteristics
- Very UV stable (non yellowing)
- Decorative designs solutions
- IMO approved
- Very low VOC emission
- Solvent-free
- Longterm elastic
- Acceleration option available

AREAS OF APPLICATION

Sikafloor® Marine-590 is designed as a part of the Sikafloor® Marine Deco systems. It is designed for mechanical resistant internal flooring in ship and boat construction and as final compound in the Sikafloor® Marine Deco system for interior and exterior use.

This product is suitable for experienced professional users only.

Tests with actual substrates and conditions have to be performed ensuring workability, adhesion and material compatibility.

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Sikafloor® Marine-590

Version 02.01 (07 - 2022), en_MY

012119015904001000

CURE MECHANISM

The curing of Sikafloor® Marine-590 takes place by a chemical reaction of the two components.

Higher temperatures speed up and lower temperatures slow down the curing process.

CHEMICAL RESISTANCE

For advice contact the Technical Department of Sika Industry.

METHOD OF APPLICATION

Surface Preparation

Sikafloor® Marine-590 is installed as a black primary deck covering and/or as floor covering in all colors.

Metallic decks need to be prepared to SA 2.5 (ISO 8501). Aluminum decks must not be shot blasted. The prepared metallic surfaces need to be clean, free of dirt, grease, oil and loose particles before the SikaCor® ZP Primer is applied. Cementitious substrates have to be mechanically prepared to remove laitance.

Clean the surface and ensure a surface moisture content of $\leq 4\%$ before applying Sikafloor®-150/-151 primer.

The application area must be protected against weather and direct sunlight.

If IMO is required, get in contact with Sika to choose an appropriate combination of the Sikafloor® Marine Deco system.

Mixing Process

Prior to mixing, stir part A. Add part B and mix continuously for 2 minutes until a homogeneous mix has been obtained.

Pour material into another container and mix again for at least 1 minute.

Use double mixing paddles not higher than 300 rpm to minimize air entrapment.

The curing time of Sikafloor® Marine-590 can be significantly shortened, by adding Sikafloor® Marine-001/-002 accelerators. The mixing procedure is the same as for the non-accelerated version, except that the accelerator is added 1 minute after start mixing A and B.

For further information regarding accelerators, check the API - Sikafloor® Marine-001/-002 or contact the Technical Department of Sika Industry.

For areas with cambers or slopes between 1% and 3% use Sikafloor® Marine Liquid PU Thickener. The dosage is between 1% and 2% in weight depending on the actual situation. For areas with higher cambers it may be required to add additional 1% to 2% of Sika® Extender T or Aerosil by weight to the mix. Alternatively, it is possible to reduce the layer thickness and apply multiple layers.

Note: By increasing the viscosity de-airing properties can be affected.

For liquid applied floors it is recommended to use Sikafloor® Marine-001/-002 to accelerate the curing and reduce the amount of flow.

Application

Sikafloor® Marine-590 is poured and spread evenly by means of a notched trowel, flat trowel or pin-rake. In critical areas a spike roller can be used to improve levelling and de-airing. For deeper sections (e.g. unevenness), it might be necessary to pre-level these sections. Ensure the pre-leveled sections have achieved "foot traffic" cure level prior to proceeding.

For liquid application on cambers and slopes multiple applications steps may be needed. Curing speed depends on temperature and layer thickness. Always consider the pot life to keep a wet edge.

Prior to application, always consult the most current Application Manual.

Curing

Indications regarding curing details see table below.

Temperature	Foot traffic	Light traffic ^A	Full cure
10 °C	30 hours	48 hours	6 days
20 °C	16 hours	24 hours	4 days
30 °C	12 hours	18 hours	3 days

^{A)} food trolleys and light rolling equipment on soft wheels

Removal

Uncured Sikafloor® Marine-590 can be removed from tools and equipment with Sika® Colma Cleaner or another suitable solvent. Once cured, the material can only be removed mechanically.

Hands and exposed skin shall be washed immediately using hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water.

Do not use solvents on skin.

Application Limits

Freshly applied Sikafloor® Marine-590 must be protected from moisture, condensation and water for at least 1 day. Uncured material reacts in contact with water (foaming).

STORAGE CONDITIONS

Both components of Sikafloor® Marine-590 have to be kept between 5 °C and 30 °C in a dry place. Do not expose it to direct sunlight. After opening of the packaging, the contents need to be protected against moisture. Minimum temperature during transportation is 5 °C.

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.

Copies of the following publications are available on request:

- Safety Data Sheets
- API (Additional Product Information) Sikafloor® Marine-001/002

PACKAGING INFORMATION

Sikafloor® Marine-590 (A)

Pail	15 kg
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Sikafloor® Marine-590 (B)

Pail	5 kg
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Sikafloor® Marine-001/002

Bottle	0.28 kg
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BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

DISCLAIMER

The information, and, in particular, the recommendations relating to the application and enduse of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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Sika Kimia Sdn. Bhd.

Lot 689, Nilai Industrial Estate,
71800 Nilai, Negeri Sembilan D.K.
Malaysia
Phone: +606-7991762
e-mail: info@my.sika.com
Website: www.sika.com.my

